Privacy and Security Standards Workgroup
<mark>Draft Transcript</mark>
May 12, 2011

Presentation

Judy Sparrow – Office of the National Coordinator – Executive Director
Good morning, everybody, and welcome to the Privacy and Security Standards Workgroup. This is a Federal Advisory Call so there will be opportunity at the end of this hour for the public to make comment. And just a reminder, work group members, please identify yourselves when speaking.

Quick roll call: Dixie Baker?

Dixie Baker – Science Applications Intl. Corp. – CTO, Health & Life Sciences
I'm here.

Judy Sparrow – Office of the National Coordinator – Executive Director
Walter Suarez?

Walter Suarez – Institute HIPAA/HIT Education & Research – Pres. & CEO
I'm here.

Judy Sparrow – Office of the National Coordinator – Executive Director
Anne Castro? Steve Findlay? Dave McCallie?

David McCallie – Cerner Corporation – Vice President of Medical Informatics
Here.

Judy Sparrow – Office of the National Coordinator – Executive Director
Wes Rishel? Sharon Terry couldn't make it. Jeff Jonas? Chris Dian? Lisa Gallagher? I know she's coming on. Verne Rinker? Debra Lasky? Mike Davis?

Mike Davis – Veterans Health Administration – Senior Security Architect
I'm here.

Judy Sparrow – Office of the National Coordinator – Executive Director
John Moehrke?

John Moehrke – Interoperability & Security, GE – Principal Engineer
Present.

Judy Sparrow – Office of the National Coordinator – Executive Director
Sue McAndrew? Ed Larsen? Kevin Stine? And John Blair? With that, I'll turn it over to Dixie and Walter.

Dixie Baker – Science Applications Intl. Corp. – CTO, Health & Life Sciences
First, I want to thank everybody for dialing in. We really appreciate it. This is our last meeting before the Standards Committee meeting next week, at which we're supposed to present our recommendations for standards for EHR query of enterprise-level provider directories. At this meeting, we have two items on the agenda. The majority of the meeting I expect to spend on this going over some draft content to present to the committee next week.

Secondly, this—I guess it was yesterday, Walter—

Walter Suarez – Institute HIPAA/HIT Education & Research – Pres. & CEO
Yes.

Dixie Baker – Science Applications Intl. Corp. – CTO, Health & Life Sciences
—the Policy Committee met, and Walter has an update for us on the presentation that the Policy Committee got from their Information Exchange Workgroup relating individual-level provider directories. So that will be a second item on our agenda today. With that, let's start on looking at our recommendations for EHR query. You'll recall that at the last meeting, we mentioned that several others would, offline, talk through the standards and come up with a recommendation, and that's what we're presenting to you today.

I wanted to make sure that we're all—just review the context, and also when we present this to the Standards Committee next week, we'll want to describe the context as well. So the specific needs that the Health Information Technology Policy Committee addressed with respect to provider directories. They started off identifying the overall need for a consistent approach to cross-organizational provider directories to support health information exchange. They found they knew, and I think the Direct Project only reinforced this, the knowledge that there exists a number of provider directories out there, but unfortunately, they aren't interoperable and generally queriable. So they recognized that need for a consistent approach to find entities to exchange information with and find services and security credentials, etc.

In September of last year, there was a full day of testimony that the Policy Committee received with respect to provider directories. The testifiers were asked to make comments on the broad category of provider directories to include both query for human readable information about entities and individuals as well as the ability for machines to query about for machine-executable information. After that testimony, they significantly narrowed the focus to really hone in on two things. One is interoperability among the myriad of existing directories they found that were out there. They recognized there was no need to rip and replace, but they needed some standards for allowing the federation of existing directories that exist and the interoperability among existing directories.

Secondly, they recognized a need for interoperability between EHRs and provider directories so as to allow EHR to query a national, federated enterprise-level provider directory for specific types of information. The information that would be queried would be information that was discoverable. In other words, it was exposed by entities as information that they made available for external exchange. So the specific content, they said that the ELPD (the enterprise-level provider directory) content should be limited to three things: Basic entity information, externally-accessible information exchange services, such as domains and message protocols, transport protocols, et cetera, and security credentials. So these are the needs that the health policy addressed and how they narrowed it down for the enterprise-level provider directory.

So the Policy Committee asked the Standards Committee to recommend standards for provider directories. So far, we have received only one request, which is the request for standards around enterprise-level provider directories. As I mentioned, Walter is going to give us an update on policy deliberations around individual-level provider directories. So we've been asked to develop standards for ELPDs. But we also have been asked to first, and most immediately, address standards that will allow EHRs to query the enterprise-level provider directory. So that's really our current task is to recommend standards for EHR query as provider directories. The reason why we've given this as an immediate need is that stage to meaningful use includes the capability of EHRs to query provider directories.

So the standards that we've been asked for are schema standards, the structure of the data, vocabulary in the state of representation and transport, how you're going to access the provider directory service and the functions are needed are the ability to search for and discover an entity. Secondly is to search for and discover the services that that entity offers for exchanging information with other entities, and thirdly is to search for and discover the entity's security credentials.

Here we summarize the direct protocol and in-hand exchange currently used to provide this type of functionality that I just listed. The Direct Project currently uses LDAP to access directory information, and some of the direct pilots are using domain name service to access directory information. It uses SMTP or secure e-mail for its transport.

Walter Suarez – Institute HIPAA/HIT Education & Research – Pres. & CEO
Dixie, I'll just interrupt you and just say that in terms of security credential discovery, it's DNS more than LDAP at present. Those are the choices, but it's more using DNS at this point.

Dixie Baker – Science Applications Intl. Corp. – CTO, Health & Life Sciences
Oh. I thought you said in one of your e-mails that it was primarily LDAP.

Walter Suarez – Institute HIPAA/HIT Education & Research – Pres. & CEO
No. I think there's a belief that LDAP is the best one for the long haul, but due to the lack of Federation's capability—

Dixie Baker – Science Applications Intl. Corp. – CTO, Health & Life Sciences
Oh, yeah. Right.

Walter Suarez – Institute HIPAA/HIT Education & Research – Pres. & CEO
—DNS is the choice for the moment.

Dixie Baker – Science Applications Intl. Corp. – CTO, Health & Life Sciences
Yeah. In fact, I meant to mention that. When I present this next week, I want to be sure to mention it. That's the limiting factor for LDAP, yeah.

Walter Suarez – Institute HIPAA/HIT Education & Research – Pres. & CEO
Yep. Thanks.

Dixie Baker – Science Applications Intl. Corp. – CTO, Health & Life Sciences
As far as the in-hand exchange—I'm making myself a note, here—the in-hand exchange has an in-hand services registry that is used to discover entities and to discover the entities, and that services exchange register uses the UDDI protocol—oh, it's a SOAP, over a SOAP query in order to discover exchange capabilities. To get security credentials, the in-hand exchange has its own managed PKI certificate authority that is cost-certified with the Federal Bridge CA. And to get transport services, it also uses UDDI directory over SOAP.

John Moehrke – Interoperability & Security, GE – Principal Engineer
I'm not sure you have consistency there.

Dixie Baker – Science Applications Intl. Corp. – CTO, Health & Life Sciences
Beg your pardon?

John Moehrke – Interoperability & Security, GE – Principal Engineer
I'm not sure you have consistency there on the last column.

Dixie Baker – Science Applications Intl. Corp. – CTO, Health & Life Sciences
Would you go back to the previous slide, please? Thank you.

John Moehrke – Interoperability & Security, GE – Principal Engineer
So under "Direct," you're saying the transport is SMTP.

Dixie Baker – Science Applications Intl. Corp. – CTO, Health & Life Sciences
Oh, yes.

John Moehrke – Interoperability & Security, GE – Principal Engineer

So I would presume that under Exchange, it should just be—

Dixie Baker – Science Applications Intl. Corp. – CTO, Health & Life Sciences
SOAP. Yes.

John Moehrke – Interoperability & Security, GE – Principal Engineer
Yeah. CBI is only used to discover the ... and end-point information.

Dixie Baker – Science Applications Intl. Corp. – CTO, Health & Life Sciences
Yeah, I'm aware of that. So yeah, that's a very good point, John. Good. Good, good.

Walter Suarez – Institute HIPAA/HIT Education & Research – Pres. & CEO
Dixie, this is very minor, but wherever we have "NHIN," we should probably put "NwHIN" on the roll.

Dixie Baker – Science Applications Intl. Corp. – CTO, Health & Life Sciences
I don't think so. I purposely did it that way, because I think—is there such a thing as new-hand exchange?
I don't think so. I think the exchange is called in-hand exchange, and they're migrating and new-hand
incorporates both the exchange and Direct. Isn't that right?

Walter Suarez – Institute HIPAA/HIT Education & Research – Pres. & CEO
No, there isn't anything anymore called "NHIN." Everything is now "NwHIN."

Dixie Baker – Science Applications Intl. Corp. – CTO, Health & Life Sciences
Okay. I'll change that. Okay. I thought it was all—okay. Got it. I changed it on my draft, here.

Okay. These are the schema content and transport standards. When we present this next week, we will
review the people that we spoke to about the standards currently in use, which was really the primary
basis for what we've identified here. So there really were three standards and/or profiles that seemed to
be good, strong candidates as potential standards to use here: the IHE Healthcare Provider Directory
profiles X12, Transaction 274, and HL-7/ONC, Health and Community Services Provider Directory. I think
that's what it's called—make sure I get all those acronyms.

The schema that's used in—let's go across for IETHPD, first—uses, for a schema the LDAP schema,
which translated into SML is DSML. The vocabulary is LDAP plus ISO. The transport standards are
DSML are either SOAP or REST, and the query language is LDAP. For X12, the schema is X12, the
vocabulary is the X12 data dictionary, and it doesn't specify what transport to use. Then the query
language is the transaction ITI 58 of 274. Then finally, the HL-7 and ONC collaboration on the HCSPD,
all of this work is currently underway, and they don't expect to really have a standard for at least a year.
But it is geared toward service-oriented architecture, and it's expected to support both SOAP and REST.
Okay.

M
That's my understanding.

Dixie Baker – Science Applications Intl. Corp. – CTO, Health & Life Sciences
The functions that need to be supported are across the top, here—Discovery of an Entity, Discover the
Entity Services, and Information Exchange Capabilities and Security Credentials. We also included
supports discovery of the individual provider and the individual provider's location, even though we
haven't been asked to do the IOPD yet. But we wanted to look at whether they were supported. I'm not
sure we need those two columns, and I'd be interested in your feedback.

The HPD supports all of these, and that transaction maybe could be used for all of these purposes, but
it's not being used for any of them right now. It's mainly used to allow provider entities to communicate
and update their list of providers that—providers to a health plan. Then as we mentioned, the HL-7/ONC
work is still underway. Before we go to the next slide, I want to ask you about those last two columns, the
individual provider, especially since they're all the same thing. Do we need those two columns?

M
I think it's a useful thing to point it out, even though it's one-step beyond what we were asked for.

M
Yeah, I would agree. If you needed to just simply put an asterisk there that says we've gone above and beyond our call, you could, but I think it's useful to say that it is also, we think, yes, yes for individuals.

Dixie Baker – Science Applications Intl. Corp. – CTO, Health & Life Sciences
Okay. That's what I'll do. That's good. Thank you.

Mike Davis – Veterans Health Administration – Senior Security Architect
Dixie, I have a quick question, here, on the slide where you have the HL-7/ONC HCSPD. So I'm not familiar with the slide, so maybe that we've already produced the slide, but I'm wondering—it's like we're endorsing a standard that has not yet been developed.

Dixie Baker – Science Applications Intl. Corp. – CTO, Health & Life Sciences
The HL-7 maybe we should provide a little bit more context around. The HL-7 definition of requirements has been done in the ONC pieces currently on the way, but we're not endorsing, I don't think, any of these.

(Multiple speakers)

M
So my point is that there's no information contained in the box. They all say exactly the same thing, and it's referencing something that hasn't been produced yet or may—we don't know when it would be produced. It might be appropriate for a note.

Walter Suarez – Institute HIPAA/HIT Education & Research – Pres. & CEO
Yeah. Mike, these couple of tables that Dixie has been reviewing are primarily to provide a background. The next slide is the one where we are actually making the recommendations on the standard. So we took the various candidates, if you will, and tried to map them against the requirements and the standard areas that we needed, and that's what these last two slides have shown is the candidates, if you will. The next slide is the one, I think, where we'll get into the—this is what we recommend based on the findings on these last two slides.

Dixie Baker – Science Applications Intl. Corp. – CTO, Health & Life Sciences
But he does have a good point, Walter, that HPD and X12 274 exist. HPSPD doesn't really exist yet. And that would be my—

M
Yep. Well, it exists in its abstract form, and that's kind of our message is that it doesn't have a concrete binding yet. So as such, it intends to meet all of these criteria, but it can't do it today.

M
In fact, none of them can meet all of the criteria today. So I'm not sure we need to distinguish—none of them meet the federated capabilities, for example.

Dixie Baker – Science Applications Intl. Corp. – CTO, Health & Life Sciences
Oh, yeah, HPD does.

M
Well, HPD is silent on how you might—

Dixie Baker – Science Applications Intl. Corp. – CTO, Health & Life Sciences
Yeah, right. It doesn't—yes.

M
LDAP, the underlying LDAP protocol, does have specifications. IG just chose not to focus anything on that, because IG was only focusing on the query site interface, not on the federation. So it was just simply out of scope of—

Dixie Baker – Science Applications Intl. Corp. – CTO, Health & Life Sciences
Yeah, but Federation is—for where we are now, this conversation is getting into the next step, which is the ... for the ELPD itself, and that's where you get into Federation. From an EHR clearing perspective, the federation of the ELPD isn't a requirement. The EHR doesn't care, as long as it has a URL.

M
Right.

M
Yes.

Dixie Baker – Science Applications Intl. Corp. – CTO, Health & Life Sciences
So what I'm thinking, maybe—well, I don't know. Somebody said maybe an asterisk. John, I think you did. What would you say—I think we're likely, given the audience of the Standards Committee and given that HL-7 and ONC are such huge SDOs in our industry, I think we should include it there. I think we're likely to get the question if we don't.

M
Well, one possible way, and this is a rather blunt and negative way to do it, is to put that comment in the comments column, like you have with X12, where you've expanded. And unfortunately, in all of those cells, you have to say no. And that's the problem is that in order to be—

Dixie Baker – Science Applications Intl. Corp. – CTO, Health & Life Sciences
Oh, of course—

M
—have to say no in all of those columns for both X12 and for ONC, just simply because of the commented reason.

Walter Suarez – Institute HIPAA/HIT Education & Research – Pres. & CEO
Or the other way, perhaps is to keep the content the way it is, but in the comment that she was pointing, John, the comment on the HL-7/ONC could be that at this point, HL-7 HCSPD exists in the abstract and that ONC is working on developing a ....

Dixie Baker – Science Applications Intl. Corp. – CTO, Health & Life Sciences
I think John is right. I think we move it—but I think, John—I think we move this comment, ONC ... to comments, because it doesn't say yes, no, or maybe, right?

M
Yeah.

Dixie Baker – Science Applications Intl. Corp. – CTO, Health & Life Sciences
But I think that in the X12 line, it does say it could support these things. So I think that those are appropriate in that line, with that comment as it stands in the X12 line. But in the HL-7 line, you should have no, no, no, no, no, and then with the comment over there, to the right.

Walter Suarez – Institute HIPAA/HIT Education & Research – Pres. & CEO
Well, can we say no, no, no, no, no, or do we need to say he could, he could, he could?

M

Yeah. See, that's the question, what does a "yes" or a "no" mean. If a "yes" or a "no" means out of the box today, support for each of these columns, then the answer has to be "no." But if the "yes" or "no" means it intends to, then the answer is, Well, yeah, it intends to, but the caveat is it's not going to happen for two years.

Dixie Baker – Science Applications Intl. Corp. – CTO, Health & Life Sciences
Yeah, okay. I—

Walter Suarez – Institute HIPAA/HIT Education & Research – Pres. & CEO
So maybe that is the problem is it intends to for HL-7, and then in the comments column put the—at this point, HL-7 is an—HPSPD is an abstract form, and ONC is working to develop the use case, that kind of a comment. But in the four or five columns, put it intends to.

M
It does include all of those things in its scope. It just isn't done yet.

M
Exactly

Dixie Baker – Science Applications Intl. Corp. – CTO, Health & Life Sciences
Well, how about—there you go, John. How about if we put "included in scope." "In scope." If we just put "in scope," "in scope" across, and then we move our comment to the right and explain.

John Moehrke – Interoperability & Security, GE – Principal Engineer
Yeah.

Dixie Baker – Science Applications Intl. Corp. – CTO, Health & Life Sciences
Does that make sense?

M
Yep.

M
Yeah.

Dixie Baker – Science Applications Intl. Corp. – CTO, Health & Life Sciences
Okay. That's what I'm going to do. And then I'll put the thing it exists in abstract form, and then the— Okay. And then the X12N I'm going to leave like it is.

M
Under X12N, thought, it includes only the attributes. It doesn't have a query capability. So we need to kind of get that message in there.

Dixie Baker – Science Applications Intl. Corp. – CTO, Health & Life Sciences
Yes. Yeah. It—

(Multiple speakers)

M
—necessary in order for it to support the query.

Walter Suarez – Institute HIPAA/HIT Education & Research – Pres. & CEO
And so ... itself is the query message. Or it could be used as a query message. Right now, it's used only as a push to send the data about the providers. But nothing prevents someone from sending the transaction to—well, I wonder. I'm thinking about this now.

M
Yeah. I don't know how you would do that.

Walter Suarez – Institute HIPAA/HIT Education & Research – Pres. & CEO
Yeah. It would be—I kind of think about it, yeah, it—

M
Yeah. I think the caveat that we heard was that the group recognizes they only do a push of a data set today, but they're willing to work with us to create the query.

Walter Suarez – Institute HIPAA/HIT Education & Research – Pres. & CEO
Yes, that's right.

Dixie Baker – Science Applications Intl. Corp. – CTO, Health & Life Sciences
Yeah. And they have some transactions that are close to a query.

M
They certainly have query transactions, yes.

Walter Suarez – Institute HIPAA/HIT Education & Research – Pres. & CEO
Oh, X12 has many query transactions.

Dixie Baker – Science Applications Intl. Corp. – CTO, Health & Life Sciences
Has query-type transactions, yes. Even though they're all pushed, implemented as pushes, they're all query-type transactions.

M
Huh? Okay.

Dixie Baker – Science Applications Intl. Corp. – CTO, Health & Life Sciences
Like coordination of benefits. It's a back-and-forth conversation.

Walter Suarez – Institute HIPAA/HIT Education & Research – Pres. & CEO
No, no. There are, for example, the eligibility transactions that take place.

Dixie Baker – Science Applications Intl. Corp. – CTO, Health & Life Sciences
Eligibility, yes.

Walter Suarez – Institute HIPAA/HIT Education & Research – Pres. & CEO
... the HIPAA—

Dixie Baker – Science Applications Intl. Corp. – CTO, Health & Life Sciences
Yes.

Walter Suarez – Institute HIPAA/HIT Education & Research – Pres. & CEO
—usually is a query response.

Dixie Baker – Science Applications Intl. Corp. – CTO, Health & Life Sciences
Okay. Yes.

M
The organization has query transactions for other purposes, but there is not a query transaction for directory purposes. Is that—

Dixie Baker – Science Applications Intl. Corp. – CTO, Health & Life Sciences
No. Right. Yes.

John Moehrke – Interoperability & Security, GE – Principal Engineer
I mean, I hate to say it, but this is very much a no, no, no. I mean—but...

Dixie Baker – Science Applications Intl. Corp. – CTO, Health & Life Sciences
Well, I don't think there's anything wrong with that, John, because I think the way we have it in the previous table, where we're really talking about the content, that's where X12 has it. When you get to the functionality, it doesn't.

John Moehrke – Interoperability & Security, GE – Principal Engineer
Right.

Dixie Baker – Science Applications Intl. Corp. – CTO, Health & Life Sciences
So I'm now, sort of, leaning towards just using "no" in both those lines and just—with a comment.

Mike Davis – Veterans Health Administration – Senior Security Architect
That would probably help. Listening to the discussion, I find the table generally rather confusing and uninformative.

Walter Suarez – Institute HIPAA/HIT Education & Research – Pres. & CEO
It will probably be "no" in all the columns, and then in the comment is where we would say the way it is right now. But I think it would be helpful to add the comment on X12 that the SPO, the X12, is willing to work on developing a query.

Dixie Baker – Science Applications Intl. Corp. – CTO, Health & Life Sciences
I agree. Yes. I think that's a good idea. So that's what I'll do.

Walter Suarez – Institute HIPAA/HIT Education & Research – Pres. & CEO
And then on the HL-7, all of them will be "no's," and in the comments, we can set the thing ... about—

Dixie Baker – Science Applications Intl. Corp. – CTO, Health & Life Sciences
Yes

Walter Suarez – Institute HIPAA/HIT Education & Research – Pres. & CEO
—it is very much an abstract, it is in scope, or it's currently in scope to support these functions. Right?

Dixie Baker – Science Applications Intl. Corp. – CTO, Health & Life Sciences
Yeah. So with X12, we would have "no" across the row, with a slightly-expanded comment to talk about the push and it doesn't support query transactions. In the HL-7, you would still have "in scope" there? I think that's fair, actually.

Walter Suarez – Institute HIPAA/HIT Education & Research – Pres. & CEO
Yeah. But in the comments—

Dixie Baker – Science Applications Intl. Corp. – CTO, Health & Life Sciences
Yeah ... in the comments, yes. Okay. That's what we'll do. Walter and I went back and forth a bit about how to present this, kind of, the content requirements and standards and certification criteria. So what we tried to do was to capture the functional requirements as criteria that could be used for certification and then the requirements as the schema, the vocabulary transport and query language. What we're recommending is for the schema would be DSML. The vocabulary would be LDAP plus ISO plus the national provider identifier. The transport would be REST, and the query language would be LDAP. And the implementation stats would be HPD. I recommend REST because it's just simpler than SOAP, and it's actually, easier to implement. But, we're up for discussion, here.

M
In your note, the last column, is a capability to send a DSML document to a RESTful. You mean query?

Dixie Baker – Science Applications Intl. Corp. – CTO, Health & Life Sciences
Yeah. But any file that contains XMLs is known as a "document." But if you think it would be clearer—

M
I think that will cause confusion. I get what you mean, but I think it will cause confusion.

Dixie Baker – Science Applications Intl. Corp. – CTO, Health & Life Sciences
Okay. That's what I'll do, change that to "query."

M
I mean, you've seen some e-mails from me on the RESTful versus SOAP. I'm unconvinced. But RESTful just really has no security model, whereas SOAP has a very strong, federatable security model. So that's my biggest concern there.

Dixie Baker – Science Applications Intl. Corp. – CTO, Health & Life Sciences
Well, you can certainly secure REST the same way that SOAP—but I understand—with TLS the same way as SOAP can. Should we put secured REST?

M
Well, but TLS only provides you one level of security.

Dixie Baker – Science Applications Intl. Corp. – CTO, Health & Life Sciences
Right.

M
There's no user attributes you can use to roll back this control to say, yeah, you have the authority to receive the certificate of this entry or you have the authority to receive the phone number or the e-mail address. If we do REST, it's all or nothing.

M
So there's ways to do it. It's just not built into the standard. You just have to pick—

Dixie Baker – Science Applications Intl. Corp. – CTO, Health & Life Sciences
Well, it's not a standard, really.

John Moehrke – Interoperability & Security, GE – Principal Engineer
Yeah, it's not standard. That's the problem.

M
It's not built into the—

Dixie Baker – Science Applications Intl. Corp. – CTO, Health & Life Sciences
Not built into ACTP. But on the other hand, if, downstream—now, this is EHR query so the queries would always be—you would want to secure them.

John Moehrke – Interoperability & Security, GE – Principal Engineer
Right. So they're coming from an EHR, which already is doing other SOAP things. So it's not at a burden.

Dixie Baker – Science Applications Intl. Corp. – CTO, Health & Life Sciences
Maybe. Maybe it's doing other SOAP things; maybe it's not.

John Moehrke – Interoperability & Security, GE – Principal Engineer
Okay. Fair enough. Okay. I just wanted to raise that. I'm not going to raise it hard enough to say, This must change, but I just want it to be clear.

Dixie Baker – Science Applications Intl. Corp. – CTO, Health & Life Sciences
Well, most services these days, or a lot of services these days can be accessed via REST or SOAP. But if we're doing a standard, I don't think—I think it's a real cop-out to say "or." That's my opinion. Others' opinions? Mike?

Mike Davis – Veterans Health Administration – Senior Security Architect
I'm afraid I'm with John on this one.

John Moehrke – Interoperability & Security, GE – Principal Engineer
You're afraid? That's twice today.

Walter Suarez – Institute HIPAA/HIT Education & Research – Pres. & CEO
So, then, John, your preference would be, what, replace REST or just say REST or SOAP?

John Moehrke – Interoperability & Security, GE – Principal Engineer
Actually, I would be happy with REST or SOAP, and that means it becomes a real time decision by the instance of the directory to say, yep, I'll allow RESTfuls to this kind of attributes, but to these other attributes, I require SOAP. So that would be my preference.

M
It does, kind of, double the burden on the—every vendor now has to be able to do both, and you still have to solve the RESTful security problem if you're going to allow it at all.

John Moehrke – Interoperability & Security, GE – Principal Engineer
You don't necessarily have to. Part of my response was to say that we have to recognize a directory has to have the ability to reject a query. So it can respond to certain kinds of restful queries for very publicly available information—fine—and it can just simply not give you their personal cell phone number unless you come in through a SOAP-based request with a specific user identity with correct role-based access control through a federated— So it just enables it. It doesn't—

M
Yeah. It just increases the complexity. I mean, I think Dixie's point is a good one is that every time you say "or" for the vendor world, you mean "and" and for the certification world, you mean "and."

Dixie Baker – Science Applications Intl. Corp. – CTO, Health & Life Sciences
Well, with the EHR—I'm playing this out. If you play this all the way out from an EHR perspective, a vendor of an EHR would only have to pick one or the other. The burden would really lie on the directory itself, on what it would accept and how it would—and what it would—exactly what John said, what rules it would apply if the query came in REST versus SOAP.

And in my mind, when we're thinking ELPD, that's—oh, well, that's ELPD. That's a national ELPD. Fine. It could be SOAP. It's a national thing. We could establish that. But if you carry it on out and think about this ELPD as a federation of … if we wanted federated provider directories in the broadest sense that are even accessible by consumers when you really play it all the way out, I don't think you want SOAP. I think you want REST.

M
Wow. And everything up until that point, I thought, yep, she's going the SOAP pathway.

M
So you're going to federate the directories, but you're not going to provide an API that is federatable. Interesting.

M
It boggles my mind.

M
Well, I mean either one can be used to solve the problem.

Dixie Baker – Science Applications Intl. Corp. – CTO, Health & Life Sciences
Yes.

M
No. That has no standards in federated identity.

M
But it can—

M
It's not.

M
You can—

M
It's not equivalent.

M
You can implement a system that matches the functional capability of SOAP using REST.

Dixie Baker – Science Applications Intl. Corp. – CTO, Health & Life Sciences
And I wasn't thinking about the federated identity. I was talking about the federated directories.

M
You have to make some decisions. You can send a SAML message with REST, if you want, and get back a token and use that in your next transaction. I mean, there's a lot of ways to do it. It's less well-specified than SOAP is. It's more flexible, less well-specified.

Dixie Baker – Science Applications Intl. Corp. – CTO, Health & Life Sciences
Yes. SOAP is the standard—

M
... is not specified how you do a SAML identity over a RESTful transaction. It is not supported. Period. Therefore—

M
But you can push a SAML message with a RESTful post and get back a token and use that for your next transaction.

M
On proprietary implementations, I agree. Which proprietary implementation are we going to choose? Microsoft? It seems we're all heading that way.

M
No. I'm just saying—

M
I mean, I'm sorry, but it's just simply not true.

M
Well, then why are all the high-scale Internet sites, not a one of them, not a single one of them, using SOAP?

M
And why are they all forcing user name and password, which then we end up with password exposures because they don't support federated IDs?

M
We do everything with O-OFF or an open ID. I mean, these problems have been solved in the RESTful space. They're not as well specified. I totally agree that SOAP constrains more and makes it easier in some ways, because there's fewer choices to make, but it's not what people are picking to actually use in the real world of high-scale federated systems.

Dixie Baker – Science Applications Intl. Corp. – CTO, Health & Life Sciences
That's right.

Walter Suarez – Institute HIPAA/HIT Education & Research – Pres. & CEO
My concern with this is that if we were to choose REST or SOAP for this particular application, which is, again, purely the message between an EHR and the providers directory, there is still a lot of unsettled recommendations around whether to use REST or SOAP when the EHR is communicating to another EHR. So here, if we make a choice, a selection, by, say, REST, and then for some reason down ... or some point later the decision is that for EHR-to-EHR communication, we're going to go with SOAP, then we're kind of going in the wrong direction by choosing ... REST only.

Dixie Baker – Science Applications Intl. Corp. – CTO, Health & Life Sciences
But the direction has gone for stage two, for provider-to-provider communication, EHR-to-EHR, is using the direct protocol, which isn't SOAP or REST. It's SMTP. So for those EHRs that rely—smaller providers that rely on Direct as their main provider-to-provider communication, this directory query—the only need for SOAP could be this directory query. I don't think we want that.

M
Dixie, can I ask John a question? John, you mentioned earlier—I think I heard you say that the IHE profile for HPD discusses both transports. Does it have a profile for both, or does it just say that you could use either one and not profile it? Or is that a meaningful question?

John Moehrke – Interoperability & Security, GE – Principal Engineer
Well, it specifies DSML, which is above, and so it doesn't get specific about whether it's a RESTful binding or a SOAP binding. But if it is a SOAP binding, it does explain how to do user identity so that the directory could do access control and—

Dixie Baker – Science Applications Intl. Corp. – CTO, Health & Life Sciences
That's a good point is that when we had our presentation by—about the ITHPD, they pointed out that DSML supports both REST and SOAP, and they also pointed out that currently their transaction for updating the directory is SOAP-based, and they're changing it to be SOAP or REST.

Walter Suarez – Institute HIPAA/HIT Education & Research – Pres. & CEO
Oh. So we can say, here, REST or SOAP. Because we're saying the profile and the implementation specification is ITHPD.

M
Is SNI Framework process going to actually turn this into a final spec? Would it be just deferring the decision to them?

M
Yeah, that's what we'd be doing.

Dixie Baker – Science Applications Intl. Corp. – CTO, Health & Life Sciences
Yes, you're right. It would be.

M
I mean, I don't have a problem with letting them make the decision in the context of a broader set of other decisions they're also making about other NwHIN transactions. I know they're rethinking a number of them. They may want something more consistent.

Walter Suarez – Institute HIPAA/HIT Education & Research – Pres. & CEO
I think that's right, and I think that's probably the best—

M
When in doubt, sweep the dirt under another rug.

Dixie Baker – Science Applications Intl. Corp. – CTO, Health & Life Sciences
Yeah. Only I think—I'm leading that power team on NwHIN for the summer. I have a feeling you're sweeping the dirt in my direction. But if that's what we want to do, I think that's what we should do. And a good point with that is that the SNI Framework is considering a whole bunch of things, and maybe this decision does need to be made in the context of the bunch of things that they're doing like—

M
That's exactly my point is that we need to consider that if we choose REST for this particular instance, but there's many other instances we might be choosing the wrong one. So I think the best way to do it is with REST or SOAP and pass it along to the SNI framework.

David Lansky – Pacific Business Group on Health – President & CEO
Well, and we could actually even make the recommendation that they pick the protocol, the transport that's most consistent with the other aspects of NwHIN protocols.

Dixie Baker – Science Applications Intl. Corp. – CTO, Health & Life Sciences
Yeah. We could even include that in our table. That's a good idea, David.

David Lansky – Pacific Business Group on Health – President & CEO
I mean, that's the reason why we're not picking, because we don't know the broader context of all the other choices that are being made in parallel.

Dixie Baker – Science Applications Intl. Corp. – CTO, Health & Life Sciences
Okay. I'm going to put that. I'll put that, the REST or SOAP, choose within the context of other NwHIN standards. Okay?

David Lansky – Pacific Business Group on Health – President & CEO
Good.

Dixie Baker – Science Applications Intl. Corp. – CTO, Health & Life Sciences
Yes. Okay. I'm making a note.

Walter Suarez – Institute HIPAA/HIT Education & Research – Pres. & CEO
There's only one other point I wanted to bring in, which I didn't ask before, and that is in the vocabulary we say ... NCI, and the NCI part, I mean, I ... space for the NPI—

Dixie Baker – Science Applications Intl. Corp. – CTO, Health & Life Sciences
... space for, but the NPI is the vocabulary. ISO doesn't specify NPI. That's why we add it.

Walter Suarez – Institute HIPAA/HIT Education & Research – Pres. & CEO
But by virtue of saying NPI remembers, the content of the ELPD as well as the ILPD, as I'll mention in a minute, includes not just the NPI, includes the NPI, the DEA, the license number, all these other numbers.

Dixie Baker – Science Applications Intl. Corp. – CTO, Health & Life Sciences

Yeah, that's a good point. Maybe we should put a plus because the NPI is not the only thing they'll need to add.

Walter Suarez – Institute HIPAA/HIT Education & Research – Pres. & CEO
Exactly.

Dixie Baker – Science Applications Intl. Corp. – CTO, Health & Life Sciences
So why don't we put NPI plus other.

Walter Suarez – Institute HIPAA/HIT Education & Research – Pres. & CEO
Other identifiers.

M
At the level of scope that this stage is at, is that—

Walter Suarez – Institute HIPAA/HIT Education & Research – Pres. & CEO
Yeah, I was thinking that too. I don't know if we would need to—we're dialing into the specifics of a particular .... I mean I'd be happy to make it as a footnote.

Dixie Baker – Science Applications Intl. Corp. – CTO, Health & Life Sciences
Okay. Let's make it as a footnote. I think it's important to call out NPI, because I think that, as we heard from … and others, that's an important vocabulary to include here. We're talking about providers.

Walter Suarez – Institute HIPAA/HIT Education & Research – Pres. & CEO
And in every place I have presented this type of recommendation, the first question is: What about the NPI? So everybody asks about where is the NPI in this, or why isn't the NPI there.

Dixie Baker – Science Applications Intl. Corp. – CTO, Health & Life Sciences
Exactly right. Yeah. So you think we should put, maybe, a footnote that says "others."

Walter Suarez – Institute HIPAA/HIT Education & Research – Pres. & CEO
Yeah. Exactly. I would.

Dixie Baker – Science Applications Intl. Corp. – CTO, Health & Life Sciences
Okay. We can do that. Okay. And our certification criteria capability to send a DSML query to RESTful ELPD service—that's why—query to ELPD service for entities—see, John, that's why I phrased it that way—capability to send a document to a RESTful service to query. But we need to change that.

Walter Suarez – Institute HIPAA/HIT Education & Research – Pres. & CEO
But you can say DSML query to a RESTful ELPD service to send to, slash, receive response from for entities.

Dixie Baker – Science Applications Intl. Corp. – CTO, Health & Life Sciences
I think it should be send a DSML document to a service, to an ELPD service, because now we're going to put REST or SOAP so we shouldn't say "RESTful" there -- to an ELPD service to query, blah, blah, blah, in quotes, for entities, entities exchange. I think that's how it should be worded. Because that is what you do. When you call up the service, you send them a DSML document that has XML, and it extracts the XML and queries the directory.

M
What's the actual question that we're trying to answer, now? I lost it.

Dixie Baker – Science Applications Intl. Corp. – CTO, Health & Life Sciences
There's actually two. John suggested we make that capability to send a DSML query to an ELDP service, and then if you keep doing that, it goes to query. So it doesn't make sense. But we totally eliminate the RESTful. It will just say "to an ELPD service." So my question is: Is it more correct to say "send a DSML

document to query a service," or is it more appropriate, more accurate, to say "capability to query a service."

M
I think for the audience that this is for, it's easier for them to read "capability to send a DSML query for entities, entities' exchange services, and entities' digital certificates." So, I mean, it gets rid of a lot of those words. I think—

M
Those are not inaccurate. It's just that for the audience of this, that's in the weeds.

Walter Suarez – Institute HIPAA/HIT Education & Research – Pres. & CEO
I totally agree. I mean, you do need to put "ELPD" someplace.

Dixie Baker – Science Applications Intl. Corp. – CTO, Health & Life Sciences
Yes.

Walter Suarez – Institute HIPAA/HIT Education & Research – Pres. & CEO
So to send a DSML query to an ELPD, not ELPD service.

M
Sorry. Yeah, I missed that.

Walter Suarez – Institute HIPAA/HIT Education & Research – Pres. & CEO
To an ELPD for entities. And I would drop service to query and then ....

M
Absolutely. That makes sense.

Dixie Baker – Science Applications Intl. Corp. – CTO, Health & Life Sciences
I think we should say a service. You've got to make it clear that you're talking about a service, I think.

Walter Suarez – Institute HIPAA/HIT Education & Research – Pres. & CEO
Well, what we're talking about is a query message to an ELPD. Period. Now, technically, it could mean—

M
You're just saying to query an ELPD service.

Dixie Baker – Science Applications Intl. Corp. – CTO, Health & Life Sciences
Yeah, because you need the word "service" in there to pull in the REST and SOAP.

M
That's fine.

Dixie Baker – Science Applications Intl. Corp. – CTO, Health & Life Sciences
Okay. And then the second one is capability to enable a user or software to list and select from the ELPD responses, and the third, capability to validate a digital certificates.

M
That was previously retrieved, right?

Dixie Baker – Science Applications Intl. Corp. – CTO, Health & Life Sciences
Yeah. The way we have it there is just to make clear that the X509 is not part of this. Yeah.

M
What do you mean by "validate a digital certificate"? In what sense? You mean to—

<u>Dixie Baker – Science Applications Intl. Corp. – CTO, Health & Life Sciences</u>
That might be beyond the scope of ....

<u>M</u>
Yeah.

<u>Dixie Baker – Science Applications Intl. Corp. – CTO, Health & Life Sciences</u>
That gets into the uses of digital certificates, not the retrieval.

<u>M</u>
Yeah, I would think so. I mean, you're going to have—

<u>M</u>
Yeah.

<u>M</u>
—an integrity-guaranteed transmission. So—

<u>Walter Suarez – Institute HIPAA/HIT Education & Research – Pres. & CEO</u>
... to retrieve rather than to validate?

<u>Dixie Baker – Science Applications Intl. Corp. – CTO, Health & Life Sciences</u>
To retrieve.

<u>M</u>
Retrieve may be what you mean, yeah.

<u>Dixie Baker – Science Applications Intl. Corp. – CTO, Health & Life Sciences</u>
... one of our conversations we talked about validation, but I think that validation is beyond the scope, here.

<u>M</u>
Yeah.

<u>Walter Suarez – Institute HIPAA/HIT Education & Research – Pres. & CEO</u>
Oh, yeah, absolutely.

<u>M</u>
So it's really to retrieve the digital certificate from an ELPD service for an identified entity, which is kind of what you said in the first one, but making them independent steps makes it more—oh, no, because the identified entity is the second step. You identify an entity that you want to have information on, and then the third step is retrieve the digital certificate for that entity.

<u>Dixie Baker – Science Applications Intl. Corp. – CTO, Health & Life Sciences</u>
For the selected entity—a selected entity.

<u>M</u>
Yeah.

<u>Dixie Baker – Science Applications Intl. Corp. – CTO, Health & Life Sciences</u>
Okay. And I think, Walter, I'm just going to take out that reference to X509. It just confuses things.

<u>Walter Suarez – Institute HIPAA/HIT Education & Research – Pres. & CEO</u>
I agree. I think we can drop it, yeah.

Dixie Baker – Science Applications Intl. Corp. – CTO, Health & Life Sciences
Yeah. Okay. Any other comments? Okay. I think that's the last slide. Is it?

M
It is, yeah.

Dixie Baker – Science Applications Intl. Corp. – CTO, Health & Life Sciences
Yes. So we have five minutes, Walter, but I do want you to update the group on the ILPD.

Walter Suarez – Institute HIPAA/HIT Education & Research – Pres. & CEO
Sure. Yeah. That will take three minutes or two minutes. So yesterday the Information Exchange work group presented with live, final recommendations on ILPD. It was great to see that—I wasn't actually able to do the presentation myself, but Micky Tripathi, who is the chair of the Information Exchange Workgroup, presented, and he incorporated a couple of ... that we have created to explain the concept around ELPD, the registry, the queries, and the priorities. So it was excellent to see that integration already there.

The bottom line is the Policy Committee has approved officially, now, the recommendations from the Information Exchange work group on the individual-level provider directory, and there were certainly a number of questions. I think the three areas that were questioned, which did not really affect the recommendations ... but are more into the future—the first one is governance. So there's a lot of questions about how is this going to be really governed and kind of, from an operational perspective, handled. So a lot of it is referred back to, kind of, the governance of work being done by ONC and the governance work group and the regulations coming up sometime later this year on governance of the information exchanges. So that was one big area of discussion.

The other one was actually some concerns about the concept that was offered on not do a rip and replace. Some people thought, Oh, we thought we were going to actually, sort of, forget about all these other proprietary directories and go with a single one that is the standard base and all that. Some of the committee members kind of pushed on that, saying, No, we do want a rip and replace. But Micky was able to clarify no, really the intent is to ensure that the existing ones meet at least the minimum standards. So it's not a rip and replace. It's really a kind of a confirmation of their capabilities to support the interoperable standard requirements. I think it cleared up the feeling from these committee members that they were really pushing for a rip and replace concept.

Then the last ones were some minor—what I think were minor adjustments to some of the language, only two areas on the adjustment of some of the language of the recommendations, which were more refined and were not significant changes or true changes in direction. So, holding the domain for area of recommendations was where the immediate policy levers the concept was asking not just CNS to do certain things but asking HHS overall, not just CMS or NC, but expanding the ability for HHS to use other policy levers to pursue the adoption of these standards.

So that's the bottom line. The recommendations have been approved. They will be, now, converted into a letter that will be sent to the Office of the National Coordinator. Then they will come to us as part of the recommendations to the Standards Committee to develop and to identify and recommend standards for IOPD. And there was very good support of the concept of understanding that the Policy Committee kind of separated for discussions and policy development purposes, ELPD from the ILPD, but that really the standards were needed to bring them back together. That was it, basically, so a very good review, good discussion and feedback, and now it's coming back to us, here.

Dixie Baker – Science Applications Intl. Corp. – CTO, Health & Life Sciences
Did they say anything at all about whether these actually need to be separate types of directory, the ELPD and ILPD, this topic that we've discussed so much in this work group?

Walter Suarez – Institute HIPAA/HIT Education & Research – Pres. & CEO
No. I think the sense was they don't need to be particularly separate, that they can reside in the same space that the ELPD part can have a more centralized component through a national ELPD registry. But

that doesn't mean that the local ELPDs will have to be separate as well. A local ELPD could include like we heard from … and from Massachusetts, they could ... in the same structure, but it's a matter of part of that goes into replicating in a central repository, if you will, which is the ELPD part, and then the ILDP part stays at the local level. But no expectation that across the board everybody will have to have two separate directories.

Dixie Baker – Science Applications Intl. Corp. – CTO, Health & Life Sciences
But people have to make a decision. The registries will have to decide, well, is this an individual, or is this an enterprise, or is this—

Walter Suarez – Institute HIPAA/HIT Education & Research – Pres. & CEO
This is more my sense than anything, is that where this is going to be taking shape is at the state HIE level. So a state HIE would be looking at, Okay, we're going to develop a provider directory. They can be a single provider directory in which we have the entity level and the individual level for the state, and now for national, kind of, interoperability, we replicate the ELPD component of the state into the national ELPD registry.

Dixie Baker – Science Applications Intl. Corp. – CTO, Health & Life Sciences
I see.

Walter Suarez – Institute HIPAA/HIT Education & Research – Pres. & CEO
But there's no national ILPD registry ... in these recommendations. So I mean, I think that's how I would see it ... at the state level, they probably are the ones that are going to decide, okay, we're going to create provider directory. We probably want to put in the entity level and the individual level in the same structure just like is being done in some states already. So I mean, conceptually, the Policy Committee recommendations I don't think were directed to create two separate directories.

Dixie Baker – Science Applications Intl. Corp. – CTO, Health & Life Sciences
So we're likely to get the ILPD text next week, I take it?

Walter Suarez – Institute HIPAA/HIT Education & Research – Pres. & CEO
Yeah, I expect that will be the case. The presentation is already on the web, and I've pulled it up, and we can distribute that, but I didn't want to distribute it, because there were some minor edits, as I mentioned, that were made by the full committee. So I'm hoping that I will get the final deck with those revisions in the next few days and I can distribute those.

Dixie Baker – Science Applications Intl. Corp. – CTO, Health & Life Sciences
Okay. Well, thank you. Are there any other comments or questions of Walter before we open up for public comment? Okay.

Judy Sparrow – Office of the National Coordinator – Executive Director
Great. Thank you, all. Operator, can you see if there's any public comment?

Operator
We do not have any comment at this time.

Judy Sparrow – Office of the National Coordinator – Executive Director
Thank you, Dixie and Walter and everyone.

Dixie Baker – Science Applications Intl. Corp. – CTO, Health & Life Sciences
Thanks, everybody again for helping us here. I think we've got some good recommendations to take forward.